INTRODUCTORY LECTURE,

DELIVERED BEFORE THE CLASS OF THE

MEDICAL DEPARTMENT

OF THE

ST. LOUIS UNIVERSITY.

J. Johnson, del *Grosvenor, sc.*

SESSION 1847-'8.

ST. LOUIS,

PRINTED BY CHAMBERS & KNAPP.

1847.

St. Louis, November 2d, 1847.

Professor Charles A. Pope:

Dear Sir:—At a meeting of the Students of the Medical Department of the Saint Louis University, held in the College Hall, we were appointed a Committee, to wait upon you, and solicit, for publication, a copy of the Introductory Lecture, delivered by you at the commencement of the Session.

Permit us, while expressing our high opinion of its merits, at the same time, to congratulate you upon your recent accession to the Chair of Surgery, which, we doubt not, will be filled with the same ability and zeal with which you have, for so long a period, discharged the duties of Professor of Anatomy.

With great respect,

We remain yours, &c.,

S. L. GANT,
GEORGE ADREAN,
E. F. SMITH,
R. R. WICKERSHAM,
THOMAS SMITH,
} *Committee.*

St. Louis, November 3d, 1847.

Gentlemen:—

I acknowledge with pleasure the receipt of your polite note of yesterday, requesting, in behalf of your fellow-students, a copy of my Lecture for publication. It affords me great gratification, that your appreciation of its merits is such as to have led to this step. The MS. is, of course, at the disposal of those for whom it was intended.

You have, also, been pleased to allude, in flattering terms, to my past performance of duty, and to my accession to the Chair of Surgery.—Whilst deeply sensible to this mark of your kindness, I would beg to assure you, that whatever zeal I may have heretofore manifested, will, in no wise, be diminished, now that I occupy a different position. My best exertions shall be devoted to rendering my new branch both attractive and instructive.

Accept, gentlemen, for yourselves individually, and be pleased to convey to the highly intelligent and respectable class whom you represent, my warmest wishes and sincerest assurances of esteem.

Very truly, your friend,

CHARLES A. POPE.

Messrs. Gant, Adrean, E. F. Smith, Wickersham and T. Smith, } *Committee.*

INTRODUCTORY LECTURE

DELIVERED BEFORE THE CLASS OF THE

MEDICAL DEPARTMENT

OF THE

ST. LOUIS UNIVERSITY.

SESSION OF 1847-8.

BY

CHARLES A. POPE, M. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY.

PUBLISHED BY THE CLASS.

ST. LOUIS:

PRINTED BY CHAMBERS & KNAPP—MO. REPUBLICAN OFFICE.

1847.

GENTLEMEN:—

In behalf of the Medical Faculty of the St. Louis University, I bid you one and all, our old and our new friends, a hearty, cordial welcome. Our pleasing relations, interrupted for a season, are now about to be resumed: and, in anticipation of the delightful, though arduous duties, devolving on you and us, I would fain indulge the hope, that we both return to our labors with renewed strength and energy of purpose —fully and firmly determined to devote to our noble science, the best efforts of our hands and hearts. Now, then, is the time for him amongst you, who, doubtful of his own powers, as unequal to the struggle in which you are about to engage, to withdraw, and yield his place to bolder aspirants: or, if proudly conscious of his own strength and constancy, to take fresh courage, and, with new enthusiasm, press boldly on, in the high career of scientific honor and professional glory.

You have, doubtless, already well considered the dignity and importance of medicine; you have fully weighed, in your own minds, the inducements which it offers, and the rewards which it yields—you have left home and friends, and have repaired hither, as a seat of learning and instruction, to us, indeed, as your future guides and preceptors.

Having, therefore, embarked on this new life, to most of you a strange and untried sea, it may not be inappropriate or altogether useless, to glance at a few of its more prominent features, to show its variations of sunshine and of storm, and to furnish you with a chart and compass, albeit of a skeleton kind, by which you may be enabled, with the aid of your own efforts, to reach the desired haven of honor and distinction.

Medicine, in fact, may, in some respects, not unaptly be compared to the great ocean. Like it, it encircles the earth, and embraces in its illimitable grasp all ages and countries. Like it, it receives and appropriates the tribute of all collateral streams. Like it, it presents its green isles and hidden rocks, its smooth seas and mælstroms, its straits and shoals, its Scylla and Charybdis, its spicy breezes and hyperborean blasts. Like the ocean, it has its beacons, to guide the wanderer over its mysterious depths, and light him to the haven of truth. Like the ocean, although its surface and its limits may be nearly known, it yet conceals, in its dark caves and unfathomable depths, mysteries unrevealed, wonders untold and unexplored—the wonders of the deep, which genius, or daring, or accident, will yet discover, to the astonishment and admiration of the world.

As, too, the tempest hurricanes, which now and then sweep, headlong, over the mighty main, stirring the huge waters to their very depths, until, at length, their fury spent, they subside into calm repose, so, from

time to time, does theory impress on medicine its tremendous influence. The frail barks, like unsubstantial doctrines, sink beneath the waves, whilst the sound and sturdy ship survives the storm, and rides triumphantly on, laden with invaluable stores.

Unlike the ocean, however, which from the beginning was fully poured in all its vast extent, medicine, from its commencement, has been constantly increasing, laden, as it is, with the spoils of successive ages. Like our own mighty Mississippi, it arises amid dark primeval forests, winds its way through many a lengthened course, deepening and widening as it rolls majestically onward, freighted with the treasures of human skill and industry, it at length pours its giant flood into the parent ocean.

Medicine is the science of ages. Although known to the earliest nations of the East, the Hindoos, the Chinese and the Druids, it was not until it appeared in Greece that we date its real origin—from votive tablets and the Asclepiadæ. The assembled Greeks, at the siege of Troy, witnessed its triumphs, under Podalirus and Machaon, sons of Æsculapius and chiefs of that illustrious house, who distinguished themselves no less as surgeons than as warriors. Homer has assigned them no inconspicuous niche among the heroes of the Iliad. As yet mere empiricism, medicine was not taught in public or special establishments —but simply transmitted, by oral tradition, either in certain families or in the colleges of the priests, it at length spread among men who inspired respect, either on account of age or authority. About the fortieth Olympiad we find it incorporated with philosophy, and again rendered of less easy access. Then commenced that era when medicine was cultivated by the great men of ancient days—philosophers, who studied it, if not with the view of practice, at least for the purpose of elucidating the high questions of science, or to serve as a foundation for the precepts of wisdom. And first among that ancient galaxy was Pythagoras, with his hygiene and mathematical formulæ. After him came Empedocles, his most distinguished disciple. A Sicilian, and the most enlightened physician of his age, he preserved his country from pestilence, by closing the openings of the mountains that gave access to the poisoned breath of a southern wind—he arrested the progress of an epidemic by constructing canals for the draining of stagnant waters, and revived an hysterical woman who was thought to be dead. The originator of the idea of the four elements, and of the comparison of the eggs of animals to the fruits of plants, which fall at the period of their maturity, he was avid of all kinds of knowledge. Through disappointed pride, it is said, he terminated his brilliant career by throwing himself headlong into the boiling crater of volcanic Ætna. Then followed Democritus, the happy sage, and one of the greatest geniuses of his time. Though accustomed to laugh at human folly, he was himself regarded by his own generation as a fool. Hippocrates called to attend him, found him occupied in dissecting animals, and thus there was established between those great men, an intimacy which ceased only with life itself.

And now arose that great luminary, Hippocrates, the father of medicine, the rays of whose genius, illuminating twenty centuries, shall be extinguished only with time itself. He first perceived the necessity of

its isolation from philosophy, and undertook to effect it. Well did he say that life is short, art is long; and that man's days are too limited to permit him to embrace, at the same time, both philosophy, which itself embrace all nature, and medicine, which should fathom one of the most difficult objects of philosophy. The principles consecrated in the works of Hippocrates were developed or modified by several celebrated physicians and philosophers; for although they did not practice medicine, the philosophers did not renounce the pleasure of its study. Several were ambitious of the honor of subjecting, to their genius, this department of human knowledge, as they subjected all others, and did not think practice, nor a scrupulous examination of the structure of the organs, necessary to unveil the secrets of living nature. Among this number was Plato. Not content to imagine a system which embraced all creation, this ambitious philosopher claimed to be a real physician, and entered into all the details of human physiology and pathology: for the last of which he borrowed much from Hippocrates and his school. But his chaotic atoms erring in space—his triangular forms—his world of intelligences—his archetypes, are only monuments of the delusions of genius; while his ideas of a God, the source of all good, and the creator of the universe, attest, in the absence of revelation, the power of his reason and the majesty of his intellect.

After Plato, and at first his disciple, came Aristotle, the stagyrite, chief of the peripatetics, and preceptor of Alexander the Great. Disgusted with the vague and arbitrary doctrine of his master, he modified it, and became the founder of another school. Naturalist, physician, and philosopher, he was also the founder of comparative anatomy. Alexander sent him animals from the distant countries of his conquests, with remarks on their habits and mode of life. From the dissection of these, and not of human bodies, he, like Hippocrates, judged of the structure of man. Praxagoras was the last of the illustrious family of Hippocrates, and he it was, who first perceived that the pulse might furnish precious signs in disease. Then there was Zeno, with his materialism and his idea of fire being the soul of the universe.

Thenceforth the theatre of the sciences was transported to Alexandria, and Egypt became radiant with light. Greece had been conquered and humbled by Philip and his illustrious son. The splendid era of her republics had passed away, and the death of Alexander left his vast empire at the mercy of his captains. The Ptolemies ascending the throne of Egypt, its capital became the centre of the civilization of the world. Physicians did not remain behind: they profited by the protection granted by sovereigns to study the anatomy of man on human dead bodies, not hitherto done. The names of Erasistratus and Hierophilus will be forever celebrated as recalling the real founders of anatomy. It was to the school at Alexandria that Galen repaired in order to behold a human skeleton.

But science, as if obedient to the star of empire, again changed her abode. It was during the reign of the second and third Ptolemies that the Romans, marching to universal monarchy, attracted into Italy the sciences and arts of Egypt and of Greece. In Rome flourished Aretæus and Celsus, a writer of the age of elegant latinity—and last, though not

least, Galen. He has been styled the second Hippocrates, and certainly deserves the gratitude of all ages, for having rescued medicine from the chaotic confusion into which it had fallen. For centuries it was handed down in the condition in which he left it, and for thirteen hundred years his authority reigned supreme. Indeed, the fame of Galen, proved, in one sense, detrimental to the advancement of medicine, inasmuch as his opinions were received as oracular in the schools of all civilized countries, thus retarding further investigation.

A cimmerian gloom was now fast overspreading the world, by which science and art were destined to be long obscured; and shortly after the time of Galen, we accordingly find the medical, along with the other sciences, encompassed by the dark clouds of ignorance and barbarism. Having passed through the dynasties of Egypt, Greece, and Rome, its existence was feebly prolonged in Arabia. From Alexandria, the "seat of learning was transferred for a time, from beneath the shadow of the cross to the empire of the crescent; from the classic shores of Italy, and of Greece, to the warlike followers of Mahomet, and the fiery descendants of Ishmael." The far-famed Caliph Haroun al Raschid founded public hospitals and laboratories for the benefit of students.—The medical school of Jondisabour, the capital of Chorassan, rose to great celebrity. Here were educated Rhazes, and Avicenna, surnamed in his day the "Prince of Physicians." The names, too, of Averrhoes, Avenzoar and Albucasis, are still bright in the annals of Arabian philosophy.

After having been for centuries almost smothered under the weight of ignorance and superstition, or the authority and dicta of great names, medicine was yet, at the beginning of the sixteenth century, in the same spell-bound condition. At length, however, practitioners of the healing art were happily convinced that the observation of nature was superior to compilation from the ancients, whether Greek, Roman or Arabian;—they consequently ceased to tread blindly and servilely in the footsteps of their predecessors, and a new era arose to the profession. Then it was that Vesalius, boldly breasting the accumulated superstition of ages, resolved to appeal from books to things, and from dogmatism to nature. By giving a new birth to anatomy, he corrected the errors of the past, made brilliant discoveries himself, and for his great services is entitled to the homage of all ages. It was soon after, that Bacon, from their house of bondage, led forth the sciences in all their native grace and untramelled beauty. Freed, thenceforth, from the shackles, which had hitherto bound it, medicine now strode onward, with giant strides, in its appointed course of extended improvement. It were difficult to single out individuals, from the vast host of those, who, since the revival of letters, have rendered important services to the science, and have recorded their names high on the tablet of fame. But we may mention, without invidiousness, the names of Pare, Morgagni, Harvey, Bœrhave, Haller, and Hunter, and many others, bright stars in the galaxy. Every country, almost, of modern Europe, has furnished its quota of men, whose memories will forever kindle with enthusiasm, the breasts of the generous devotees of our art. The genius of Bichat, towards the close of the last century, eclipsed the glory of most of his predecessors,

while the present age has witnessed the fall of Dupuyten and Sir Astley Cooper, of Laennec and Broussais. But vast and powerful is the host who are still laboring, with incredible zeal and distinguished success, in their noble calling. The dark days of the profession have, we trust, forever passed away; and, we doubt not, that in all coming time, many will be the illustrious names in which it shall exult. Indeed, the progress of our science, like that of every other, is essentially onward. For whatever difference of opinion may exist, as to the comparative merits of the ancients and moderns, in the arts, in poetry, and in all that depends on imagination, there can be no doubt that in science the moderns have eminently the advantage. It could not be otherwise. As has been eloquently expressed, by a late popular writer, "in the early ages of the world, as in the early period of life, there was the freshness of a morning existence, when the gloss of novelty was on every thing that met the eye; when the senses, not blunted by familiarity, were more keenly alive to the beautiful, and the mind, under the influence of a healthy and natural taste, was not perverted by philosophical theory;—when the simple was necessarily connected with the beautiful, and the epicurean intellect, sated by repetition, had not begun to seek for stimulants in the fantastic and capricious. The realms of fancy were all untraveled, and its fairest flowers had not been gathered, nor its beauties despoiled by the rude touch of those who affected to cultivate them. The wing of genius was not bound to the earth by the cold and conventional rules of criticism; but was permitted to take its flight far and wide over the broad expanse of creation.

"But with science it was otherwise. No genius could suffice for the creation of facts—hardly for their detection. They were to be gathered in by painful industry; to be collected from careful observation and experiment. Genius, indeed, might arrange and combine these facts into new forms, and elicit, from their combinations, new and important inferences; and in this process might almost rival, in originality, the creations of the poet and the artist. But, if the processes of science are necessarily slow, they are sure. There is no retrograde movement in her domain. Arts may fade, the muse become dumb, a moral lethargy may lock up the faculties of a nation, the nation itself may pass away, and leave only the memory of its existence, but the stores of science it has garnered up will endure forever. As other nations come upon the stage, and new forms of civilization arise, the monuments of art and of imagination, productions of an olden time, will lie as an obstacle in the path of improvement. They cannot be built upon; they occupy the ground which the new aspirant for immortality would cover. The whole work is to be gone over again, and other forms of beauty—whether higher or lower in the scale of merit, but unlike the past—must arise to take a place by their side. But in science, every stone that has been laid, remains as the foundation for another. The coming generation takes up the work where the preceding left it. There is no retrograde movement. The individual nation may recede, but science still advances. Every step that has been gained makes the ascent easier for those who come after. Every step carries the patient enquirer after truth higher and higher towards heaven, and unfolds to him, as he rises,

a wider horizon, and new and more magnificent views of the universe."

And thus shall medicine, the science of centuries, rich with the spoils of all ages, and nations, and tongues, in the fulness of time, approach nearer and nearer perfection. Its march is ever onward—who shall stay its progress, or limit its bounds?

> Like to the Pontic sea,
> Its ——————————compulsive course
> Ne'er feels retiring ebb, but keeps due on
> To the Propontic and the Hellespont.

Embracing, as it does, so vast a field, and involving in its circle so many sciences, each one of which would require a life-time to fathom, medicine, in order to its clearer comprehension, and more perfect elucidation, has been divided into several branches. At a period, when our art was in its infancy, it may have been possible for a single individual to have taught all that was then known concerning it. But as its store of knowledge and facts increased—as its field widened and its bounds were thrown back—as the sciences sprang into new life, and expanded so as to embrace the universe in their study, it became no longer practicable, especially in the lamentably short period of four months, for one man to teach, in a proper manner, its accumulated knowledge—not even its principles, much less its thousand important varied and interesting details. Hence the subdivision into departments, and the established number of professorships.

Our whole business, gentlemen, is with man, and whatever concerns his health and well-being. The Anatomist, therefore, will unveil to your admiring gaze the fearful and wonderful mechanism of his physical structure, and point out the admirable fitness and adaptation of each and every organ. Not only will he display the more coarse and patent disposition of parts, but armed with the microscope he will penetrate into the hidden secrets and curious arrangement of man's molecular organization.

Anatomy is the vestibule, or rather the very foundation of the medical edifice. Without it there is no physiology, no surgery, no medicine. Deeply grounded in anatomical knowledge, your subsequent studies will be comparatively plain and easy—without it, you will in all your after steps experience only doubt, difficulty, defeat, disgrace. You cannot, therefore, devote too much time and attention to this all important subject; and let me beseech you, as you value reputation and the approval of your own conscience, not to neglect it. Remember, that half anatomists are always bungling practitioners. Feelingly and knowingly would I urge you to embrace the present golden opportunity. So fit a season may never again recur, and if unimproved and neglected now, you may, and probably will, while you live, suffer the bitter stings of a remorseful conscience, and wear on your mantled cheeks the blush of shame.

But, if master of anatomy, your feet will be placed on a rock; and whether amid the perils of practice, or the fierce conflict of doctrine and opinion, it will prove as your refuge and rallying-point, firm and unshaken—a beacon to guide and cheer you on through every difficulty and every danger.

Nor, while contemplating man's physical organization, will you approach his body lightly, or fail to feel in whose presence you are. Your awe-struck minds will be lifted in fervid adoration to that Being who links his strong connections and nice dependencies, in one harmonious and wonderful organization, where every thing has been foreseen and co-ordained with such intelligence and wisdom, that not a single fibre can have too much or too little strength, without the instant destruction of equilibrium and the commencement of disorder. The chef-d'œuvre of creation, God's last and noblest work: the microcosm of nature, how beauteous and perfect is man! How strong, and yet how frail! How curious, and yet how useful, the knowledge of his material structure! How insearchable and past finding out, his mysterious union of mind and matter! Truly may he be styled a living anthem and a breathing monument to Him who spake him into existence in his own image, and breathed into his nostrils the breath of life. In vain the paltry utterance of man's lips to tell its wonders or declare its praise, for anatomy indeed, speaks its own eloquence.

The second link in the chain of the medical sciences, of which Anatomy constitutes the first, is Physiology. This has been defined the sum total of the functions—the science of life. It shows us in action those organs of which anatomy has revealed to us the structure. It is the natural play and motion of the delicate and complicated wheels and mechanism, which make up man's organization—it is, if I may so speak the music of the vital organic choir; which, when harmonious, is health, when discordant, is disease.

This then, better than all reasoning, teaches the intimate association, and direct dependence of Pathology upon Physiology, and proves indeed, that the study of the functions in health, should precede their study when deranged or diseased. If it be difficult, even in a watch or steam-engine, to detect a false wheel or deranged pipe, unless you fully understand the proper play and action of those machines, how much more difficult and impossible then, to discover derangement or disorder in man's complex and delicate organism, without knowing its healthful functions!

Physiology is the field of ingenious experiment, of subtle speculation, and of fanciful hypothesis. But it is also a field which has not been worked in vain—which, indeed, to the faithful tiller of its soil, has yielded fruits and flowers of the fairest and most useful kind—a field, on which have been achieved some of the proudest victories of human intellect. What more brillant, than the discovery of the circulation of the blood by the immortal Harvey. What more important than the triumph of Eustachius, Rudbeck and others, in unveiling the mysteries of nutrition and waste! What more unfading than the laurels of Sir Charles Bell, and the honors of Majendie!

Much, yet, however, remains to be accomplished. Other trophies yet exist; other laurels may yet be won. An elucidation of the functions of the different nervous substances and ganglia—the determination of the uses of the thymus and thyroid bodies of the renal capsules and of the spleen—the rending of the veil which shrouds in its mysterious folds, the phenomena of reproduction, are problems yet to be solved.

May it be the proud lot of some of you gentlemen, to illumine these obscure points, and to extort from nature a knowledge of her secret processes—and thus entwine for your own brows a wreath of unfading glory.

But the admirable machinery of man's organism, constantly exposed, as it is, to numerous and varied baneful influences, is liable both to derangement and disorder. Heat, cold, miasm and accidents innumerable, are so many causes of disturbance; while dire poison of whatever kingdom, may be mingled with the current of the life's blood, which thus infected, spreads havoc throughout the system, dealing death and destruction in every pulsation.

To note the cause, origin, course and termination of these derangements and disorders, constitutes Pathology. It teaches the laws of diseased action, and consequently forms a large and important part of medical science. Without Pathology, in fact, or disease, there would be little practical benefit derived from the cultivation of medicine, and the studies of the physician would be considered as among the curiosities of knowledge. But embracing, as it does, a vast sphere, comprehending the simplest elements and highest philosophy of medicine, and involving problems of the deepest interest to humanity in the department of medical and surgical practice, its importance can scarcely be exaggerated. Fully appreciated in this respect by Morgagni and others, it was not until the immortal labors of the illustrious Bichat, that Pathology found its legitimate basis. The discovery of General Anatomy by the great Frenchman paved the only true way for the proper study of the ravages and modifications of disease, as it affects particular structures or tissues. Profiting by his labors, and toiling with a zeal and devotion, challenging our praise and admiration, the galaxy of distinguished pathologists of the present day have shed around their own and their country's name a halo of undying glory. It was the dawn of a new era, and its light has been shed abroad not only over all Europe, but its effulgent beams shooting athwart the broad Atlantic, have been reflected back from the Western Hemisphere. Honor then to Andral, Louis, Chomel, Carswell and Cruveilhier.

It is not the mere study of the various alterations and changes wrought by disease in the several tissues of the organism, in their more visible and palpable characters—nor of the difference of form, color or consistence of the structural lesions and noxious growths which occur in the body, that constitutes the end and aim of Pathology. This has a more difficult and higher aim. The knowledge of these obvious lesions is indeed important, but they are only the mere results, and as it were the last expression of morbid action. It is these results, in fact, which in numberless instances kill; and as they constitute a large proportion of the cases which fall to the care of the physician, he should of course be intimately acquainted with them. But there are anterior and deeper, though invisible changes, with which it imports still more to be familiar —those primitive and often slight and insidious alterations, which form the first departure from health—which constitute the first link in the chain of deranged function, and whose effects on the blood and sentient nervous extremities, though faint at first, gradually increase in strength,

and if unchecked, pursue their course, terminating either in a restoration to health, or in the accomplishment of their fell career.

The discovery and investigation of the laws, which govern the origin and causes of disease generally, form the end and object of General Pathology. Special Pathology has reference to the course and modifications of disease in particular organs, and is more properly denominated Pathological Anatomy. This in its extended signification may, it is true, embrace Pathology as well as Pathological Chemistry, just as Anatomy includes the chemical composition of the different portions of the body.

Another fundamental branch of medicine, is Materia Medica. As its name implies, it is the arsenal from which the physician draws his arms to combat disease; for as an army without the weapons and implements of warfare, so would the practitioner be without the aid of the Materia Medica. It ranges throughout all nature, over the animal, vegetable and mineral kingdoms, in search of agents and remedies, for the prolongation of human life and the mitigation of human suffering. And such, indeed, has been the success of this search through revolving ages, that to display its present riches and teach its accumulated knowledge, well requires a separate and distinct professorship. Its duties consist in the classification of medicines, in grouping together such as produce like effects on the human system, in disjoining those of dissimilar action, in noting their physical and chemical properties—their commercial history and mode of preparation—their incompatibles and medical uses.

But to be acquainted with medicines, without a knowledge of their application, would be as vain as to have arms and not know how to use them. That branch of your studies which affords you this knowledge, and acquaints you with their adaptation to particular circumstances, is called Therapeutics. And as a knowledge of medicines is closely connected with their uses, these subjects are very properly embraced under one chair.

Therapeutics includes the study of the physiological action of medicines, as well as their remedial effects in disease. And next to being able, accurately to distinguish between diseases, in other words, to diagnosticate them, the ability to make the proper selection of an appropriate medicine, precisely adapted to a particular case, is what especially characterizes the tact and superiority of one physician over another. To the superficial thinker, this might appear to be a matter of no great difficulty, but all experience teaches the contrary, and that close observation and sound judgment are alike concerned in its attainment. In this department, then, you will be taught to discriminate between shades of therapeutic action, and thus be enabled the more effectually to select your remedies—for the arch-enemy, proteus-like, assumes a thousand forms, and must be met accordingly. If frank, open and bold in attack, you will go forth clad in the panoply of the most heroic agents—but if more subtle and insidious in approach, sapping, as it were, through a lengthened period, the strongholds of life, you can likewise find means, not the less sure because slow, to thwart his designs, and rescue the victim from his relentless and insatiate grasp.

Another important and interesting branch of medicine is Chemistry. This studies the molecular reactions of bodies, as Astronomy studies them in masses. The same law, in fact, which binds atom to atom, binds, also, world to world, and holds the sun and planets in their flaming and eternal orbits. And notwithstanding it descends into atomic minuteness and microscopic detail, yet are its results striking and sublime. By the action of caloric on a single drop of water, the principle is illustrated by which is generated the power that urges the wheeling car, and impels the oak-ribbed leviathan of the deep. It is, perhaps, the same that rouses the slumbering volcano, and speeds abroad dread earthquakes, making the nations pale with fear. The atmosphere is exhausted from the receiver of an air-pump—thus the tropic sun rarifies the air, and the trade-winds rush from the pole to the line. A solar ray falls on a prepared surface, and the sunbeam paints us pictures unattainable by human art. A portion of acid acts on two small plates of different metals, and thought and intelligence fly on the lightning's wing.

Chemistry ranges through nature—nor earth, nor air, nor tree, nor living thing escapes her grasp. All things visible are made to pass the fiery ordeal of her all-searching crucible, and compounds, the most complex and refractory, are severed in their affinities and resolved into their primeval elements. At her magic touch rocks crumble, metals yield, water becomes air, diamonds burn—she makes agriculture a science, and causes medicine to leap into newness of life. Chemistry is, in truth, the mother-science, involving, in her universal range, the simplest phenomena of the kitchen and every day life, as well as the highest principles of philosophy. To the merely curious, no study is more novel, beautiful or attractive. Its brilliant metamorphoses please alike the child and the philosopher. Whilst exciting curious attention, it possesses the prominent and gratifying feature of being always fraught with real utility to mankind. Her every improvement and discovery directly extend the sphere of human comfort and amelioration. Nor, like human laws and governments, whose application varies with age, and race, and country, do hers change—for the laws which govern the relations of matter, are, as their divine Author, fixed and eternal. A republic may suit one country and nation and period, and not even these at different epochs, yet steam, the magnetic telegraph and photography will remain while time itself endures.

Chemistry, in her generous munificence, likewise extends important aid to medicine. It constitutes the foundation for theories of disease—explains the modus operandi et medenti of various remedial substances, and aids in many cases the formation of a beautiful and sure diagnosis. It makes of man a wonderful vital laboratory, in which are effected strange and curious processes. It shows us, too, his material structure to consist of the most common principles.—In his blood is the iron, which forms the implements of war—in his bones, the rocks which build up the mountains—in his brain, the phosphorus and sulphur, which frightens ignorance in the will o' the wisp, and in gunpowder, hurls the leaden death-dealing tempest—in his breath, the agent of combustion and supporter of life, usurping the place of the constituent of the diamond, and of the dense forests which overshadow the earth. It

sheds a day of light on the great processes of digestion, respiration, secretion, nutrition, and the production of animal heat: in a word, it is a flambeau which will yet illumine many, if not all, of the deepest and darkest depths, the hidden secrets of the animal organism in health and disease.

To the physician she furnishes many of his most invaluable and indispensable agents; while, by the knowledge which she imparts, he is enabled to avoid all incompatibility. She it is that places in his hands the implements of his art, and gathers into his materia medica the compacted and concentrated principles of nature's remedial and often bulky compounds. She it is that sends him Mars to war against disease, and Mercury, the messenger of the gods. She, too, it is, that gave him the ethereal essence, that last best boon of Heaven to man; by whose aid, the grim monster Pain, that for six thousand years has stalked undisturbed through the world, torturing human nerves and spreading anguish and death in his course, has been made subject to our control, and even to annihilation. What more striking proof of the divine mission of our art! What more glorious instance of its ceaseless and ever onward progress!

But, gentlemen, having mastered the various subjects to which your attention has been briefly directed, an important part yet remains. Anatomy, Physiology, Materia Medica, Pathology, Therapeutics, and Chemistry, are but the foundation upon which is reared the fair temple of medicine. Or, if you choose, each may constitute a pillar, beautiful it is true, and symmetrical in itself, and rearing its head on high, but which, in order to utility and perfection of design, should occupy its appropriate place in the general structure, where alone it can conduce to the beauty and grandeur of the whole. They are but the means to the great end and aim of your studies and strenuous exertions. The *cui-bono*, indeed, of all your toil and ambition is the cure of disease and the preservation of health. And, as the repartition of labor ensures an approach to perfection, here, again, we have a subdivision, viz: the practice of medicine, properly so called—surgery and obstetrics. These are the three great roads diverging from a common point, each of which, though occasionally touching, and sometimes crossing the others, yet pursues, in the main, a somewhat separate and distinct course. All are alike narrow, tortuous, and hedged in on either side by peculiar difficulties: now stretching along through pleasant valleys and fields enamelled with flowers, now climbing bare and rugged heights, frowning with gigantic obstacles. All alike entail on him, who would tread their devious paths, heavy and delicate responsibilities; yet all alike cleave the distant hill of science and lead to that proud temple which shines afar.

Cicero has said, that man in nothing so resembles the gods, as in giving life and health to his fellow-man. Yes, such is our mission. It seeks no political and noisy distinction—it forms no high-road to preferment—it delights not in the field of carnage, though here its benefits are conspicuous—it aims at nothing, indeed, which usually attracts the ephemeral applause and shouting admiration of the unthinking multitude. No, its theatre is private life, its course is calm and serene—its rewards, the heart's deep unbought gratitude—its objects, high, ennobling, god-

like. 'Tis our's to touch the human lyre, that "harp of thousand strings," which but for the skill and science of our art, would often lie broken, shattered and tuneless in the dust. Honor then to the enlightened devotees of the healing art—to that noble profession, whose every impulse is benevolence, whose aim and great exemplar are divine.

The physician and the surgeon should both alike be well and thoroughly grounded in the great and fundamental doctrines and principles of our art, for these lie equally at the foundation of their respective callings. The physician should know something of surgery, as he is not unfrequently compelled, even against his inclination, to perform certain important operations. On the other hand, to be a good surgeon, one *must* be a good physician. The term surgery implies all that medicine does and more. It demands not only the exercise of the mind, but that of the hand also; which, guided by science and skill, has achieved in our profession such bold and brilliant exploits.

In the department of the principles and practice of medicine you will be made acquainted with all those general causes which produce and keep up disease—with the characters, or signs and symptoms, which will enable you to distinguish one disease from another, with their course and termination, and the treatment best adapted to their cure.—This chair embraces the study of all those diseases, termed internal, and such as custom, rather than nature, has allotted to the province of the physician; while, for an equally arbitrary reason, the external affections are ranked under the head of surgery.

And this constitutes the other branch in the department of practice, in which it is hereafter to be my duty and pleasure to instruct you. Surgery is a noble field. It is as old as man himself, and co-eval with his fallen state. It is even older than medicine, for the fall entailed the frequent reception of injuries by external violence; and to assuage their pain and remove their inconvenience, the ingenuity and contrivance of man were doubtless powerfully excited.—Moreover, it is known that Æsculapius practiced many operations, and among the rest lithotomy, which Hippocrates made his disciples swear that they would not perform, no one knows why, but most probably, because he thought them too difficult. Physicians say, because he was a physician. So far, then, as regards the question of precedence and primogeniture, as applied to physic and surgery, the former must give place to the latter, as Æsculapius, the God of Surgery, lived upwards of seven hundred years before Hippocrates, the acknowledged founder of medicine. But although of greater antiquity than medicine, surgery was, for many centuries, comparatively neglected, and remained far behind her sister science. Indeed, for a long period, the performance of operations was regarded as beneath the dignity of the learned and scientific physician, and for this reason, they were, as is well known, committed to the more ordinary cure of barbers and others, who exercised their inferior office of cutting, under the authority and direction of their more enlightened superiors. In the progress of time, however, the barber-surgeons gave place to those who not only knew *how*, but *when* to resort to operative procedures. It was in the beginning of the sixteenth century that Vesalius gave birth to anatomy, prop-

erly so called, and illuminated by this science, surgery became a worthy object of pursuit to men of talents and education, and under their influence it was gradually raised to an enlightened and liberal profession.—Anatomy, indeed, lies at the very foundation of surgery, for this is constantly engaged in restoring what has been broken or displaced, in removing noxious growths from the body, and in performing such other operations as require a thorough knowledge of the human organism.—Before undertaking the management of a machine, it is necessary to have a full acquaintance with its various parts and uses—and no where is this more evident or important than in surgery. Here human life is concerned, and ignorance finds no apology. In fact, it is especially in surgery that its questions may be said to be those of life and death; and woe be to him, who rashly intrudes on her domain. Happy will it be for him, and his patients, should he timeously discover his mistake, and stop before he has gone too far. Surgery, nevertheless, possesses this great advantage, that while, in most diseases, we are at a loss whether to attribute the cure to nature or to medicine, in many cases requiring surgical interference, there is and can be no doubt. The benefit here conferred is unquestionable, and often even life itself is clearly and unequivocally saved. Who, for instance, will deny the good resulting from the operation for cataract, where the patient, instead of groping his way in darkness, and shut out from the inestimable pleasures of sight, is enabled, after years, it may be, of desponding gloom, to behold the glories of nature and to look upon the human face divine? Or, think for a moment, of the certain and dire consequences of those painful and fatal diseases, the throbbing aneurism, the grinding calculus and the strangulated hernia. By the benign interposition of skill, who can dispute the boon here conferred—who say that life has not been saved?—Glorious triumph of art, that while it cheats the grave of its victims, erects them into living monuments, to proclaim the power and glory of surgery.

It is on account of such obvious and striking results that this department of the healing art enjoys so perfect an immunity from the daring profanity of quackery and empiricism. Do you ever hear of a homœopath, a hydropath, or a steam-doctor, performing any important surgical operation? The reason is plain. Here there is no tampering, and doubt may be fatal. Half-way knowledge even is of no avail—positive science is necessary. And the charlatan, who, in the secret corners and dim confines of medicine, drives his heartless traffic in human suffering, fears the open field, and like the big-eyed bird of night shuns the light of day. It cannot be denied, however, that empirics in ages past, have successfully performed certain difficult operations—but these form the exception, and should serve as a solemn warning to all those who would follow in their footsteps—for we must never forget how many lives were sakelessly sacrificed before they attained their requisite skill. Thanks, however, that there are paths in which the empiric dare not tread—and greater thanks still, that there are subjects connected with our art on which the public is a competent judge. In surgery, gentlemen, you need never fear the competition of quacks. For here the results speak for themselves, and this being the case, the man-

tle of surgery will ever remain pure and unsullied, unpolluted by the profane touch of the empiric, and its folds shall forever encircle and irradiate the worthy forms of the faithful alone.

Surgery, I have said, is a noble field—noble in its study—noble in its aim—noble in its results. It boasts many of the brightest ornaments in the profession, and is illustrated by the achievement of bold and brilliant exploits. On him, who is ambitious of its honors, there weighs a heavy responsibility. But if to a fine character, the surgeon joins a solid instruction and an elevated mind, if he has known how to make of his profession a religion, and of his patient a friend, he cannot fail to inspire the unbounded confidence of all around him, and to attain that exalted and enviable elevation, to which his ambition may justly prompt. His career, though less lauded than that of the hero or statesman, is yet equally worthy of renown. Talk of the courage which braves the din of battle and the cannon's mouth, but the courage of the surgeon is greater still than this. No unusual excitement, no shared conflict, no instinct of self-preservation, no gaudy honors of a grateful country impel him to action. Calm, alone, with steady eye and unflinching nerve, he lays hold of his scalpel—the sword of science. A fellow mortal—God's creature, is before him, whose fate is in his hands. The gaping cut is made—his delicate touch explores the evil, and with his eye at the point of his knife he dives deeper and deeper down amid fearful parts and thick-set dangers—

> Harder beset
> And more endangered, than when Argo pass'd
> Through Bosphorus, betwixt the justling rocks:
> Or when Ulysses on the larboard shunn'd
> Charybdis, and by the other whirlpool steer'd.

On one hand throbs an artery whose gush is death, on the other lies a nerve whose lesion entails palsy. The phrenic thread of life itself may be severed; or the greedy air, rushing with horrid gurgle into the patulous mouths of divided veins, and mingling with the life current of the blood, may in an instant, sunder the chord of existence, and snatch the sufferer from this scene of terror and dismay.

But the operations of surgery, however skilfully performed, are not to be mentioned in comparison with successful cures without the knife. Indeed, the diminution of operative procedures is the highest boast of modern surgery. With regard to operations, true surgery rather avoids than courts them; and in this respect, unlike what takes place in all other professions, the improvements introduced into it, cause a diminution in the emoluments derivable from the practice of surgery. It is a well established fact that in several of the great capitals of Europe, the incomes of medical men are much reduced from this cause, and yet, nevertheless, they persevere with laudable disinterestedness in their endeavors to effect still further improvements. Can any other profession exhibit such a degree of philanthropy?

But, although in one sense, the advancements of our science have caused a judicious diminution of surgical operations; in another, there is an increase. Many operations, unknown in former times, are now in

common practice, affording striking evidence of progress, and constituting triumphs of modern surgery. Witness, for example, the operations for squinting, club-foot, the extirpation of both jaws, and the removal of the diseased ovarium.

But, it is less in the invention of new, than in the improvement and abandonment of old methods that modern surgery lays claim to pre-eminence. These modern improvements depend more especially on the recent advances in Anatomy and Physiology; and I need scarcely apprize you that there never was a period in the history of the profession, in which an exact knowledge of the structure and functions of the body—a knowledge to be obtained only by the combined aid of Chemistry and Histology—bore so directly on medical theory and medical practice. The retort and the microscope, it has been well said, are now becoming as much the pocket companions of the practitioner, as the lancet and the stethoscope; and it is curious to observe how the uphill tracks of the stethoscope to public favor, in former days, have shadowed forth that, through which the microscope is now destined to wind its tardy way.

It would prove an interesting as well as a profitable subject, did time permit, to bring before you some of the most striking improvements in surgery, which have taken place in latter years. A lesson of this kind, by exhibiting to view the pursuits and energies of the great men of the profession, and the path to fame which still lies open to new aspirants, might make a useful and lasting impression on your plastic and ardent minds. But the space left me, forbids even an illusion; they will be fully insisted on in their proper place in the course about to ensue.

Such, gentlemen, is an outline of the different studies which make up the science of medicine, for a knowledge of whose elements you have sought this University. It is needless to say, in return for the confidence thus placed in the faculty, that we solemnly pledge our best endeavors in your behalf, and shall use every effort to fulfill your brightest hopes and the high expectations of your friends. The lessons here taught will be the results of the accumulated wisdom of past ages. In all cases, they will bear the stamp of attested truth, and rest upon foundations broad and impregnable. We are all deeply impressed with the responsibility of our respective positions. I feel, however, every confidence that the incumbents of the several chairs will fully merit and sustain whatever good opinions you may have already formed of their abilities and talents. With regard to your old teachers, I can only promise you a continuation of that industry and devotion to their duties which have heretofore characterised them.

Of the new occupant of the chair of materia medica, it is scarcely necessary to say, that the high and acknowledged position, which his standing and talents have secured for him in the profession of our city, give every assurance of eminent success in the new sphere to which he has been called. Of undisputed ability and untiring industry, I am freely warranted in guarantying the success here predicted.

With your future teacher of anatomy, you will also, I am sure, have abundant reason to be more than satisfied. With a mind of a high

order, conceded talents and unceasing devotion to his profession, he comes to us with well earned honors gathered in the Old World. A student of the great schools of England, France and Germany, and disciple of that living galaxy of masters and lawgivers who adorn the temple of modern medicine, he has well profited by their able lessons and ample experience. But his own original researches have given his name no little eclat. They have led to the establishment and elucidation of a law, as new as it is surprising, and have made him authority on the subjects to which they relate, and his name known wherever medical science is cultivated.

For myself personally, I cannot contemplate the duties of my new chair in this university without feelings of great anxiety and distrust. I deeply feel the increased responsibility that I have incurred; but cheered by the kindness hitherto shown me, and sustained by an unfaltering trust, I shall assume those duties, in the hope of still further indulgence—determined that no pains or exertion on my part shall be spared to merit your approbation and to sustain the credit of the chair, which I hold. The step may fail, the head grow white and the eye dim, but while life and strength remain, I expect to devote all my energies to the good of the profession, and your best interests. The prospect, gentlemen, of a successful professional career is too inviting: nor can I forego the temptation. Here are all the requisites for a great medical school, viz: a large and rapidly increasing population, abundance of anatomical material; extensive and well regulated hospitals, filled with patients affected with every variety of disease, from all parts of this vast valley, and affording superior advantages for clinical instruction. Nor is there wanting talent and enterprise to turn these to a good account—to the benefit of science and of mankind. We, of the present generation, it is true, are but laying the foundation of that future great school, which, situated in a city that must become the medical, as it is the commercial metropolis of the Great West, should be the centre from which might emanate the rays of science to illumine the length and breadth of this vast and beautiful region. Its superstructure will be finished by other hands, and within its walls shall be gathered of every race and costume and tongue. If the star of science, like that of empire, westward takes its way, why, in time, should its glory not rival or eclipse that of those ancient and venerable schools which now adorn the capitals of the Olden World? I firmly believe, that the day will come, when on the banks of the Mississippi, and at this the centre of our great republic, such a school will exist. Its destiny is linked with the future might and power of this growing metropolis, whose vigorous youth gives promise of a giant manhood. The heart of the great and glorious West, the centre of thousands of miles of river navigation, its social, commercial and political prosperity is as illimitable as the progress of civilization, and the settlement of this vast continent.

In view, therefore, of the future greatness of St. Louis, as a medical school, it is, and shall be the aim and ambition of those more immediately concerned to establish a deep and broad foundation, so that she may be raised to a proud eminence and to a level with her high destiny. We, the faculty, are not unmindful of our important trust, and that we

shall be answerable to posterity concerning it. It is then with any other than feelings of indifference, that we have witnessed the efforts now being made throughout the land to sustain and elevate the character and usefulness of the profession, and to promote the improvement of medical instruction in our country. We hail with pleasure, and will join heart and hand in every effort likely to conduce to such wished-for results. Let the older institutions lead the way in this work of desired reform, and we shall not be the last to follow.

Allow me, again, gentlemen, in the name of your alma mater, to bid you welcome to her halls, and to assure you of the lively interest she feels in your behalf. You are now enrolled among her sons, and ere long, some of you having fulfilled her requirements, may contend for the wearing of her highest honors. She expects every man to do his duty, and wishes to rest her claims to public confidence, and an enviable distinction, on her own intrinsic merits, and the character of her alumni. For twenty years she has enjoyed the privileges of a liberal charter granted by our State Legislature, and already has her name reached the utmost bounds of christendom. You need have no fears, gentlemen, that our institution is not both widely and favorable known, nor that any is more permanently established. Settle where you may, whether on the far-off Oregon, or on the banks of the Willamette, among the fastnesses of Mexico or of California, in the New or in the Old World, her name will receive everywhere, honorable testimony from men of science and of a knowledge of the affairs of the world. This information, however novel to some, is yet strictly true, and I repeat, that throughout the civilized globe, not only is her existence known, but an interest is felt in her behalf. Cherish then a lively and enduring affection for her, who will ever be the first to exult in your happiness and glory in your prosperity.

Finally, gentlemen, the broad field of Philosophy lies open before you. Enter boldly upon it, and firmly resolve to scale its giddy heights, as well as to explore its highways and secret places. If possible, thrust back its bounds, extend its limits, and while conferring benefit on mankind, gain immortality for yourselves. Here you may achieve victories without woe, and conquest will ensure only unalloyed glory. Will, then, to soar with no middle flight, o'er her broad expanse, and aim for her proudest heights,

"To where she caught the soul of Newton and of Socrates;"

of Franklin and of Davy, of Harvey and of Bichat; and amid the glories of meridian day, snatch from Nature her undiscovered wonders. Her fields abound in scenes and vistas more lovely than the imagination can paint—in fruits and flowers more valuable than the golden Hesperides. All else may satiate, and, with advancing years lose its relish—but not thus with heaven-born Philosophy. She is ever fresh and novel, and like truth—"The immortal years of God are hers." She will repay

your devotion—postpone not until life be far spent, but commence at once, while time and opportunity invite. The fleeting years hurry swiftly on—delay is fatal—then,

——————— Take the instant way,
For honor travels in a straight so narrow,
Where one but goes abreast; keep then the path
For emulation hath a thousand sons,
That one by one pursue: if you give way,
Or hedge aside from the direct forthright,
Like to an entered tide, they all rush by,
And leave you hindmost.———————